

ABSTRACT

[0080] A diaphragm valve (5 comprising a valve body (1 having an inlet sleeve (3) and an outlet sleeve (4) that converge to a fluid flow chamber containing a valve seat (106). and divided into two parts, one being integral with the valve body (1) and the other one consisting of a bonnet (2) sealably fitted onto the valve body (1). An elastic diaphragm (5) is provided having a peripheral flange (105) connected to a central dome-shaped part (305), which may be compressed against the valve seat (106), thereby preventing any fluid flow from the inlet sleeve (3) to the outlet sleeve (4). The cross section of the two sleeves (3, 4) near the valve seat (106) is flattened in the direction of flow and elongated in the direction transverse thereto, so to form a substantially elliptical port, whereas the dome (305) of the diaphragm (5) has the shape of a sector of an ellipsoid.